

# BookletChart™

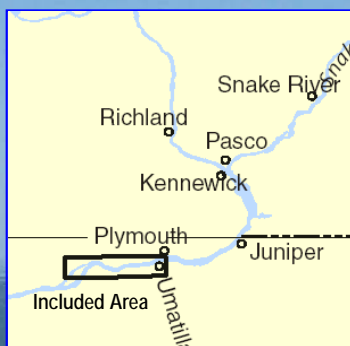


## **Columbia River – Blalock Islands to McNary Dam**

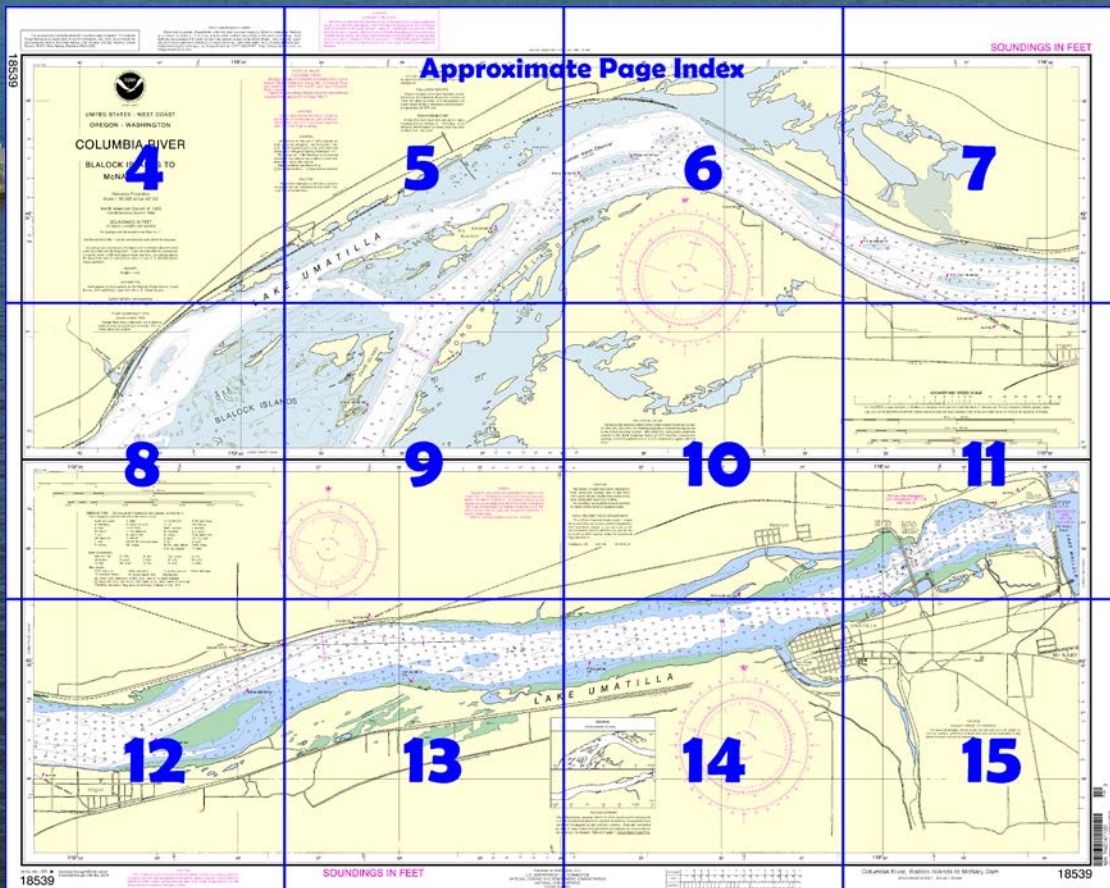
**NOAA Chart 18539**

*A reduced-scale NOAA nautical chart for small boaters*

*When possible, use the full-size NOAA chart for navigation.*



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



**Published by the**  
**National Oceanic and Atmospheric Administration**  
**National Ocean Service**  
**Office of Coast Survey**  
[www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov)  
**888-990-NOAA**

**What are Nautical Charts?**

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

**What is a BookletChart™?**

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

**Notice to Mariners Correction Status**

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=18539>.



**(Selected Excerpts from Coast Pilot)**

**John Day Dam**, 188 (216.3) miles above the mouth of the Columbia and 21 miles above The Dalles Dam, has a single lift lock with a vertical lift of about 105 feet. **Restricted areas** are above and below the dam. (See **207.718**, chapter 2, for information concerning use, administration, and navigation of John Day Dam.) Depths and overhead clearances are at **normal pool level**. The rock awash near the E approach to John Day Locks in 45°43'25"N.,

120°41'20"W. is marked by a light and sign; mariners are urged to exercise caution when passing N of Lake Umatilla Lighted Buoy 2, so as

to avoid being carried to the NW and striking the rock awash.

**Lake Umatilla**, the pool created by John Day Dam, extends 65 (75) miles to McNary Dam. Depths are generally great, but there are many shoals. The winding channel through the lake has a controlling depth of about 19 feet and is marked by aids to navigation. The chart is the best guide. An overhead power cable with a clearance of 95 feet is about 41 (47.2) miles above John Day Dam.

**John Day River** is 2.3 miles above John Day Dam on the S side of the Columbia. Just S of the highway bridges over the entrance to the river is the **John Day River Recreation Area**. There are floats here for about 40 craft and a launching ramp. The fixed highway bridges have a clearance of 19 feet.

A grain elevator with barge-loading facilities is at **Arlington**, OR, 21.5 (24.7) miles above John Day Dam. A loading tower for the elevator is marked by a light. Small-craft moorage and a launching ramp are available at Arlington.

At **Boardman**, 45.6 (52.5) miles above the John Day Dam, there is a small-craft basin protected by a stone breakwater and a jetty. Berths and a launching ramp are available here.

There are two woodchip docks, a general cargo dock, and a grain elevator dock at a port about 1.2 miles NE of the small-craft basin at Boardman.

A grain elevator dock and barge loading pier is on the Oregon side of the river, about 3 miles NW of Irrigon, OR.

**Umatilla** is on the Oregon side 62 (71.3) miles above the John Day Dam. There is a small-craft basin about 500 yards W of the highway bridge. The E side of the entrance is marked by a light. About 125 covered and uncovered berths, electricity, gasoline, diesel fuel, water, and ice are available. A concrete launching ramp is at the basin.

The fixed parallel highway bridges across the river, 63 (72.5) miles above the John Day Dam near Umatilla, each has two navigational spans with a least clearance of 71 feet. The N openings are generally used during high water because there is less current, but during low water it is unsafe. The power cables E of the fixed parallel highway bridges have a least clearance of 82 feet.

**U.S. Coast Guard Rescue Coordination Center**  
**24 hour Regional Contact for Emergencies**

RCC Seattle

Commander  
13<sup>th</sup> CG District  
Seattle, WA

(206) 220-7001

# Table of Selected Chart Notes

**HEIGHTS**  
Heights in feet.

**CAUTION**  
The depths of water have been determined from conditions existing prior to the filling of the pool. Shoaler depths than charted may exist, particularly near the shoreline.  
No soundings are available in areas depicted by depth curves, except in isolated cases.

For Symbols and Abbreviations see Chart No. 1

**RADAR REFLECTORS**  
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

**POLLUTION REPORTS**  
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

**AIDS TO NAVIGATION**  
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

**CAUTION**  
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

**Mercator Projection**  
Scale 1:20,000 at Lat 45° 55'  
  
**North American Datum of 1983**  
(World Geodetic System 1984)  
  
**SOUNDINGS IN FEET**  
AT MEAN LOWER LOW WATER

**NOAA WEATHER RADIO BROADCASTS**  
The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.  
  
Pendleton, OR    WXL-95    162.55 MHz

**CAUTION**  
Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.  
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.  
Station positions are shown thus:  
○ (Accurate location)    ◌ (Approximate location)

**WARNING**  
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

**NOTE A**  
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Washington or at the Office of the District Engineer, Corps of Engineers in Seattle, Washington.  
Refer to charted regulation section numbers.

**STATUTE MILES**  
**COLUMBIA RIVER**  
Mileage distances along the Columbia River are in Statute Miles. Distances along the Columbia River are eastward from the mouth and are indicated thus: —◆—  
Tables for converting Statute Miles to International Nautical Miles are given in Coast Pilot 7.

Soundings and clearances of bridges and overhead cables between John Day Dam and Mc Nary Dam in Lake Umatilla refer to normal pool elevation which is 285 feet above mean sea level. Soundings above Mc Nary Dam refer to normal pool elevation which is 340 feet above mean sea level.

**AUTHORITIES**  
Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U.S. Coast Guard.

**HORIZONTAL DATUM**  
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.523" southward and 4.073" westward to agree with this chart.

**SOURCE DIAGRAM**  
The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

**CAUTION**  
**BASCULE BRIDGE CLEARANCES**  
For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

**CAUTION**  
**CHANGES in BUOYAGE**  
Mariners are advised that authorized aids to navigation are being changed to conform to maritime standards of the International Association of Lighthouse Authorities Maritime Buoyage System, Region B. Significant changes are: black port hand buoys to green; black and white vertically striped buoys to red and white vertically striped buoys; and lateral lights from white to red and green as appropriate. Changes to aids to navigation will be announced in the National Geospatial-Intelligence Agency weekly Notice to Mariners and the U.S. Coast Guard Local Notice to Mariners.

**ABBREVIATIONS** (For complete list of Symbols and Abbreviations, see Chart No. 1.)  
Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
A alternating	IQ interrupted quick	N nun	Rot rotating
B black	Is isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstr obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

2L Wreck, rock, obstruction, or shoal swept clear to the depth indicated.  
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.  
COLREGS: International Regulations for Preventing Collisions at Sea, 1972.



18539

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, <http://NauticalCharts.gov>, [help@NauticalCharts.gov](mailto:help@NauticalCharts.gov), or [help@OceanGrafix.com](mailto:help@OceanGrafix.com).

Mariners conform to m Authorities Ma port hand buo vertically stried Changes to aid Agency week Mariners.

UNITED STATES - WEST COAST  
OREGON - WASHINGTON  
**COLUMBIA RIVER**

**BLALOCK ISLANDS TO  
McNARY DAM**

Mercator Projection  
Scale 1:20,000 at Lat 45° 55'

North American Datum of 1983  
(World Geodetic System 1984)

SOUNDINGS IN FEET  
AT MEAN LOWER LOW WATER

For Symbols and Abbreviations see Chart No. 1

Additional information can be obtained at [nauticalcharts.noaa.gov](http://nauticalcharts.noaa.gov).

Soundings and clearances of bridges and overhead cables between John Day Dam and McNary Dam in Lake Umatilla refer to normal pool elevation which is 265 feet above mean sea level. Soundings above McNary Dam refer to normal pool elevation which is 340 feet above mean sea level.

HEIGHTS  
Heights in feet.

AUTHORITIES  
Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U.S. Coast Guard.

SUPPLEMENTAL INFORMATION  
Consult U.S. Coast Pilot 7 for important supplemental information.

PLANE COORDINATE GRID  
(based on NAD 1927)  
Oregon State Grid, north zone, is indicated by dashed ticks at 5,000 foot intervals. The last three digits are omitted.

STATUTE MILES  
COLUMBIA RIVER

Mileage distances along the Columbia River are Statute Miles. Distances along the Columbia River are eastward from the mouth and are indicated thus: Tables for converting Statute Miles to International Nautical Miles are given in Coast Pilot 7.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

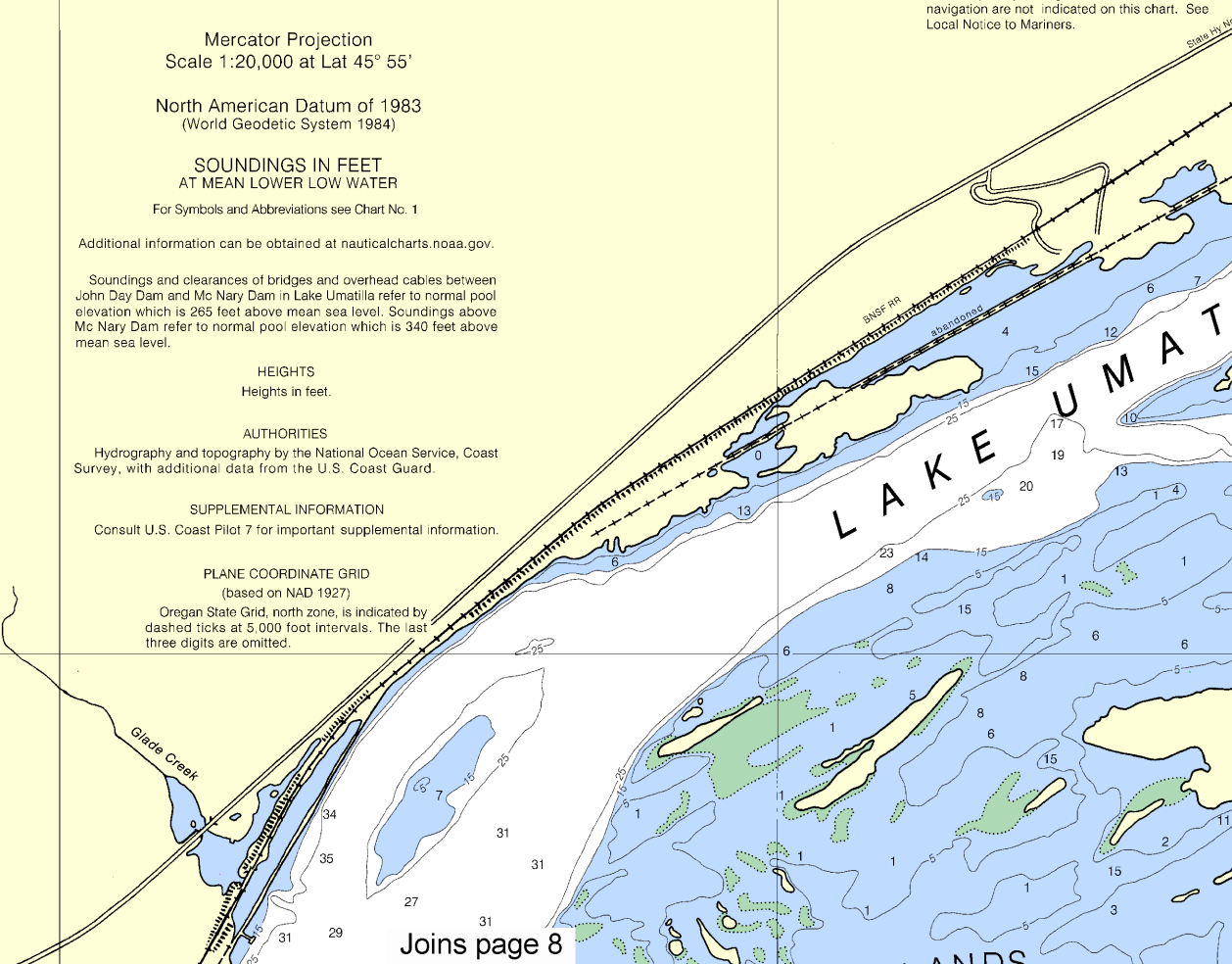
CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:  
 (Accurate location) (Approximate location)

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.



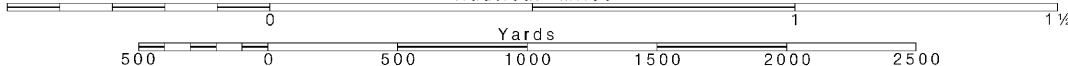
4

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:20,000  
Nautical Miles

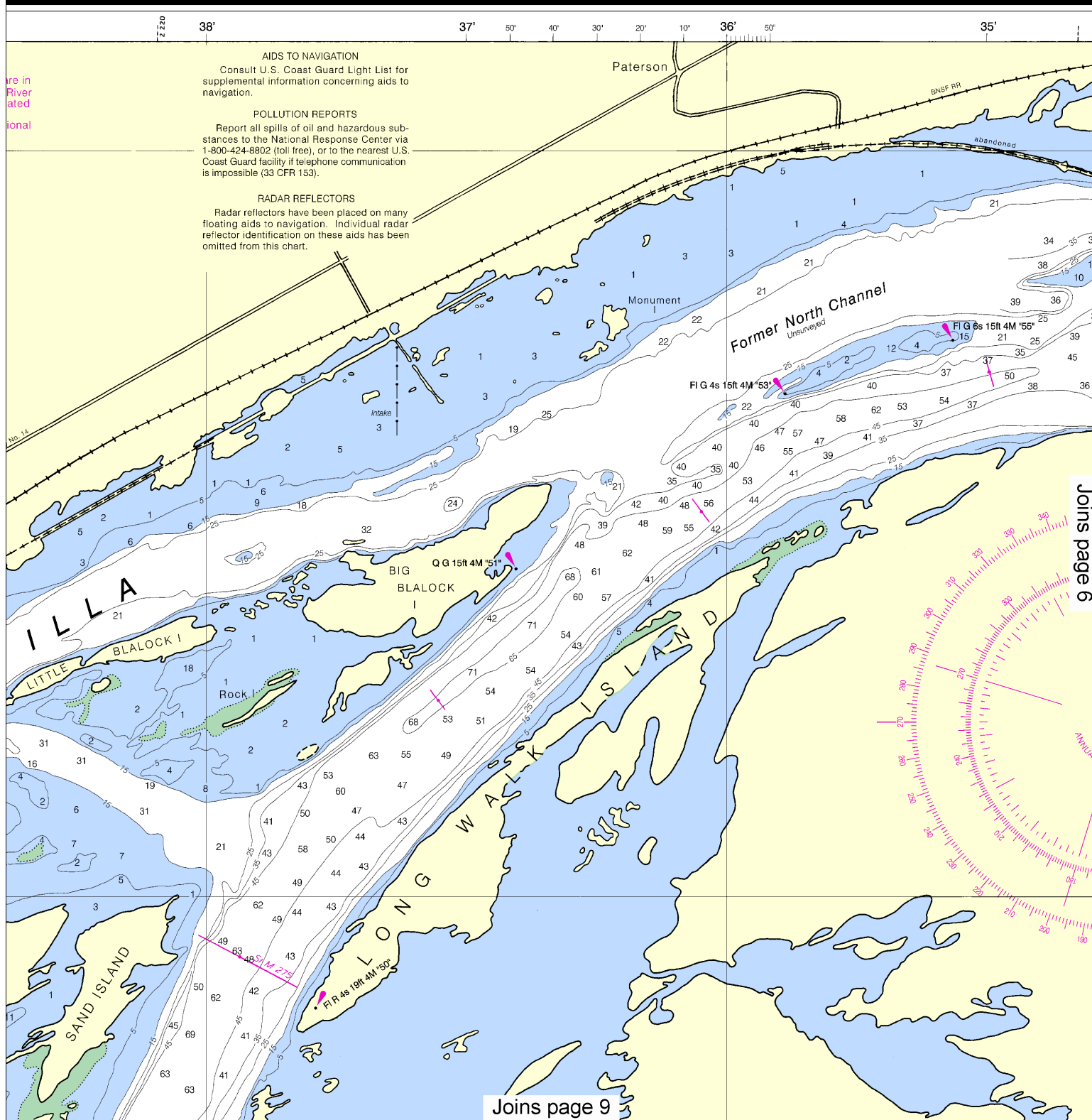
See Note on page 5.



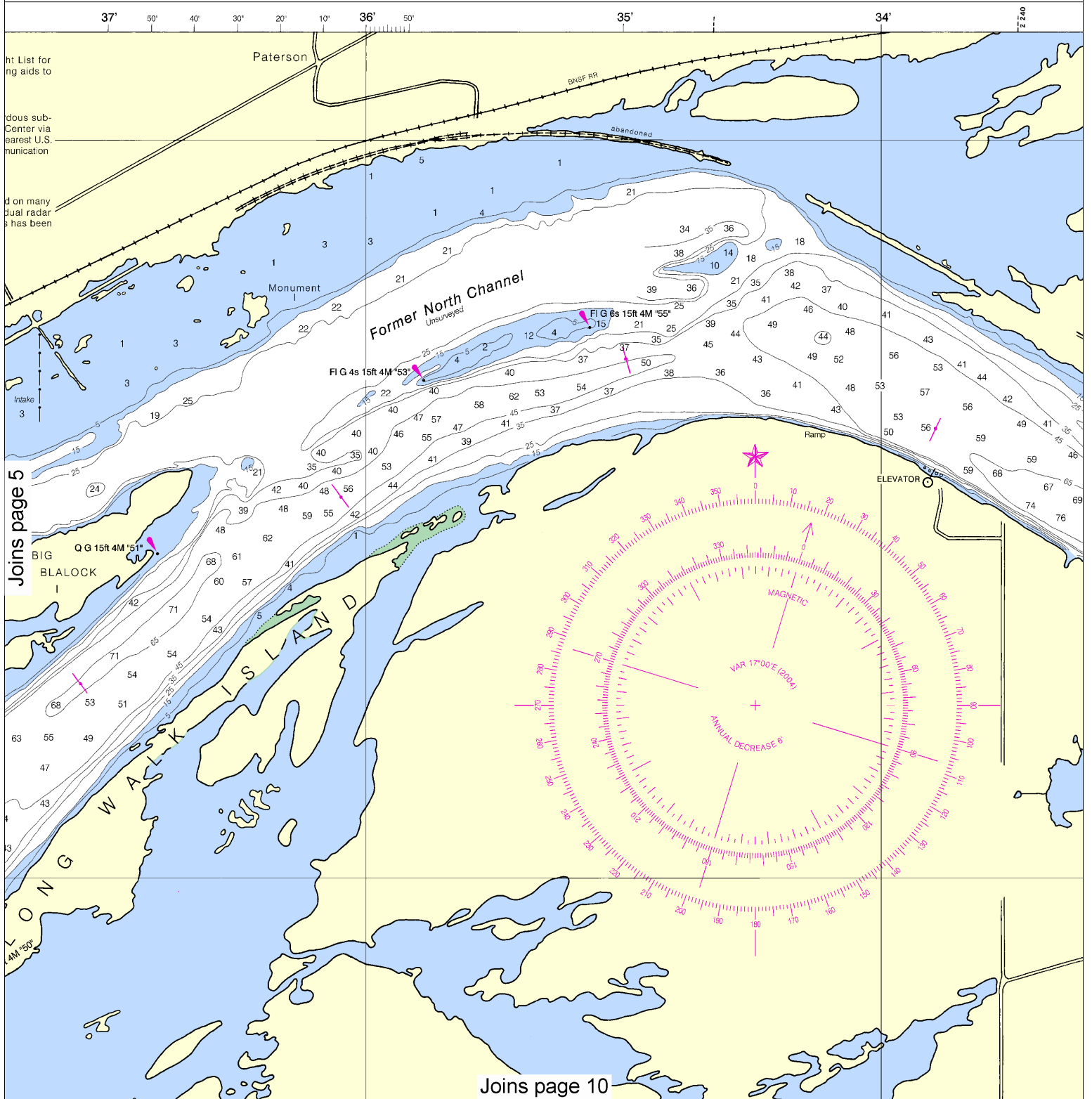
**CAUTION**  
**CHANGES in BUOYAGE**

Users are advised that authorized aids to navigation are being changed to maritime standards of the International Association of Lighthouse Maritime Buoyage System, Region B. Significant changes are: black buoys to green; black and white vertically striped buoys to red and white vertically striped buoys; and lateral lights from white to red and green as appropriate. Aids to navigation will be announced in the National Geospatial-Intelligence Weekly Notice to Mariners and the U.S. Coast Guard Local Notice to Mariners.

Formerly C&GS 6162, 1st Ed., Dec. 1961 D-1961



This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:26667. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.



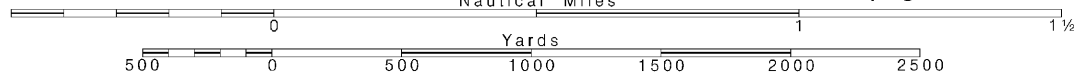
6

Note: Chart grid lines are aligned with true north.

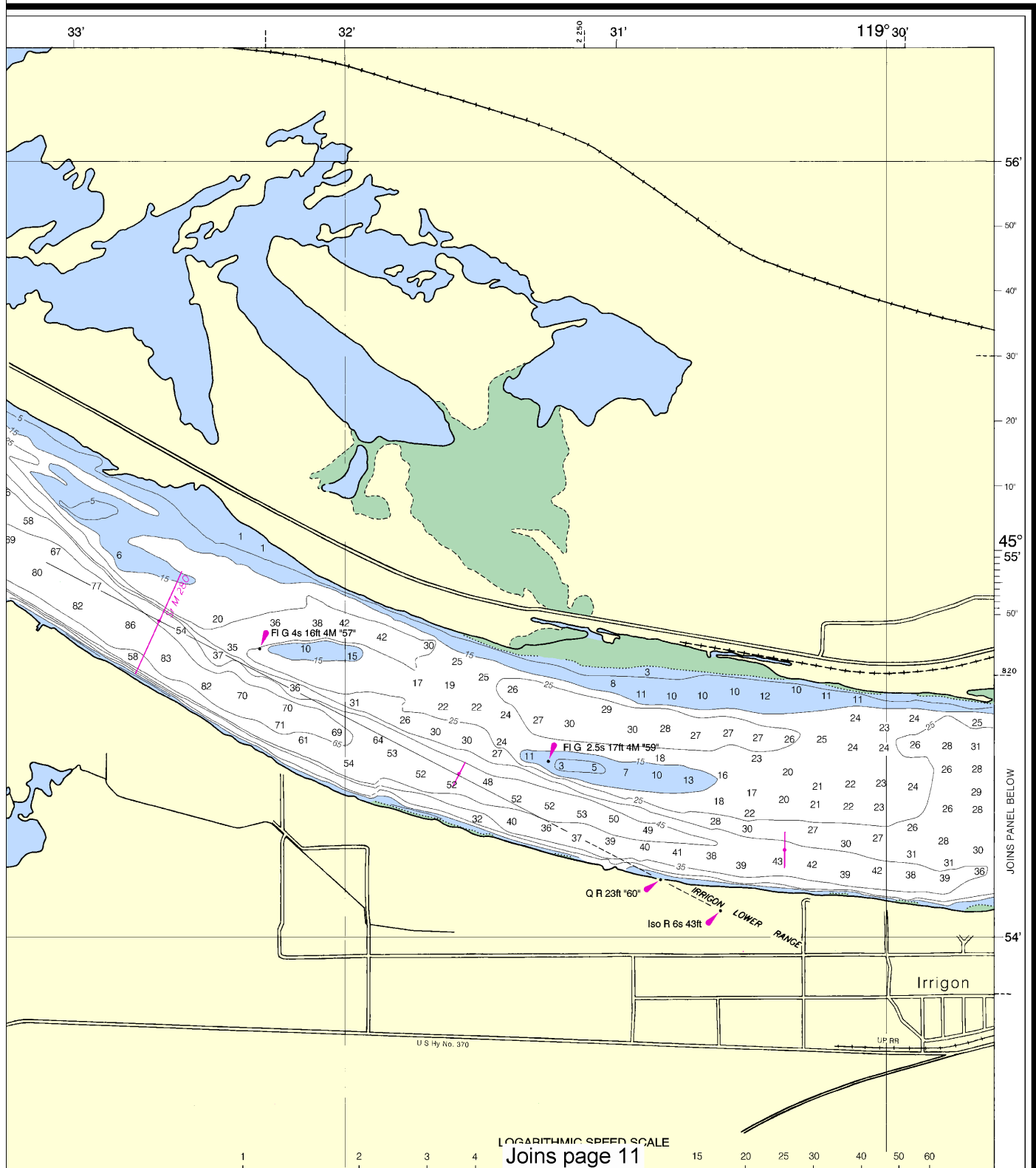
Printed at reduced scale.

SCALE 1:20,000  
Nautical Miles

See Note on page 5.



# SOUNDINGS IN FEET



This BookletChart has been updated through: Coast Guard Local Notice To Mariners: 4812 11/27/2012,  
 NGA Weekly Notice to Mariners: 4812 12/1/2012,  
 Canadian Coast Guard Notice to Mariners: 0912 9/28/2012.

Soundings and elevations of bridges and dams.  
John Day Dam and McNary Dam in Lake Umatilla refer to elevation which is 265 feet above mean sea level.  
McNary Dam refers to normal pool elevation which is 340 feet above mean sea level.

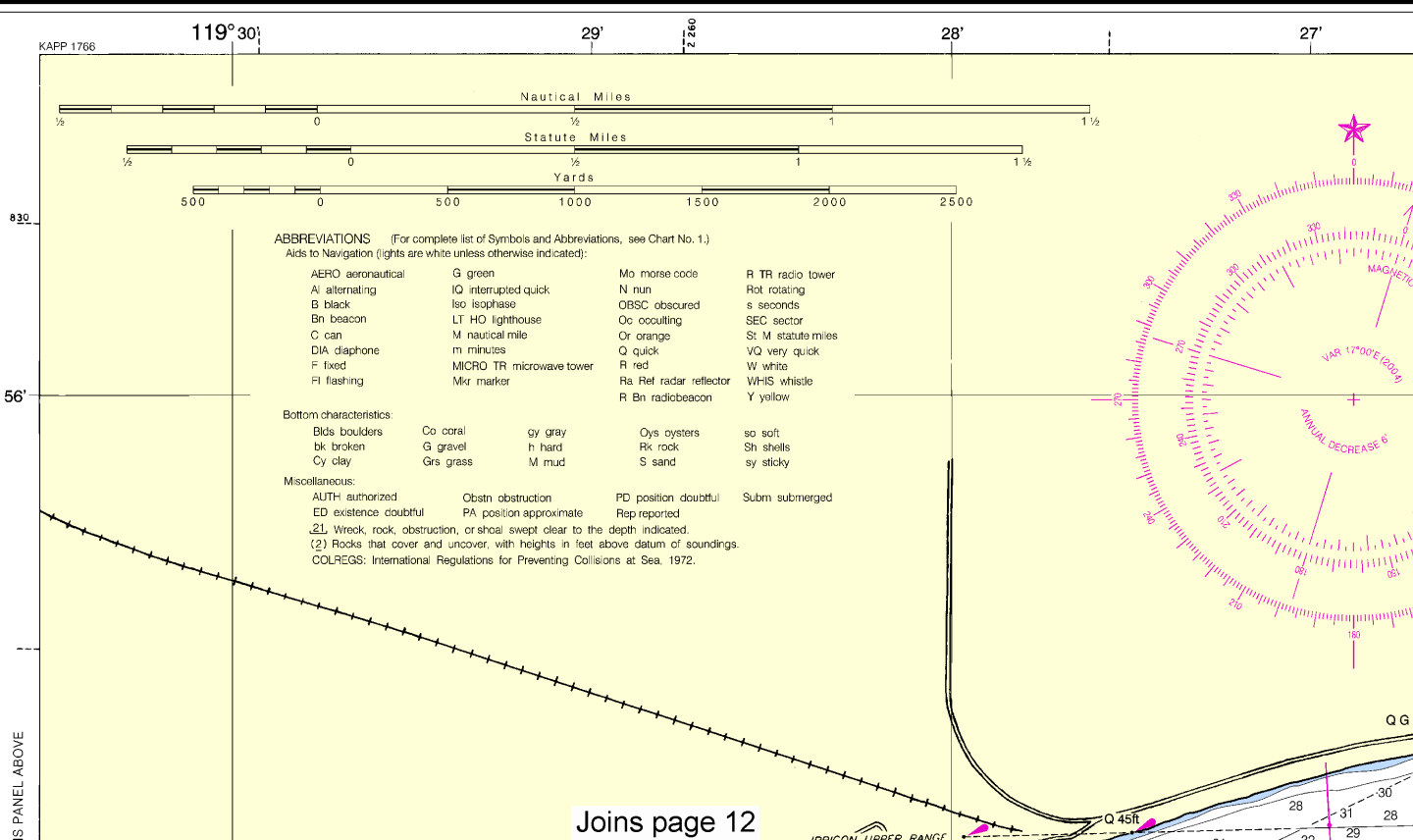
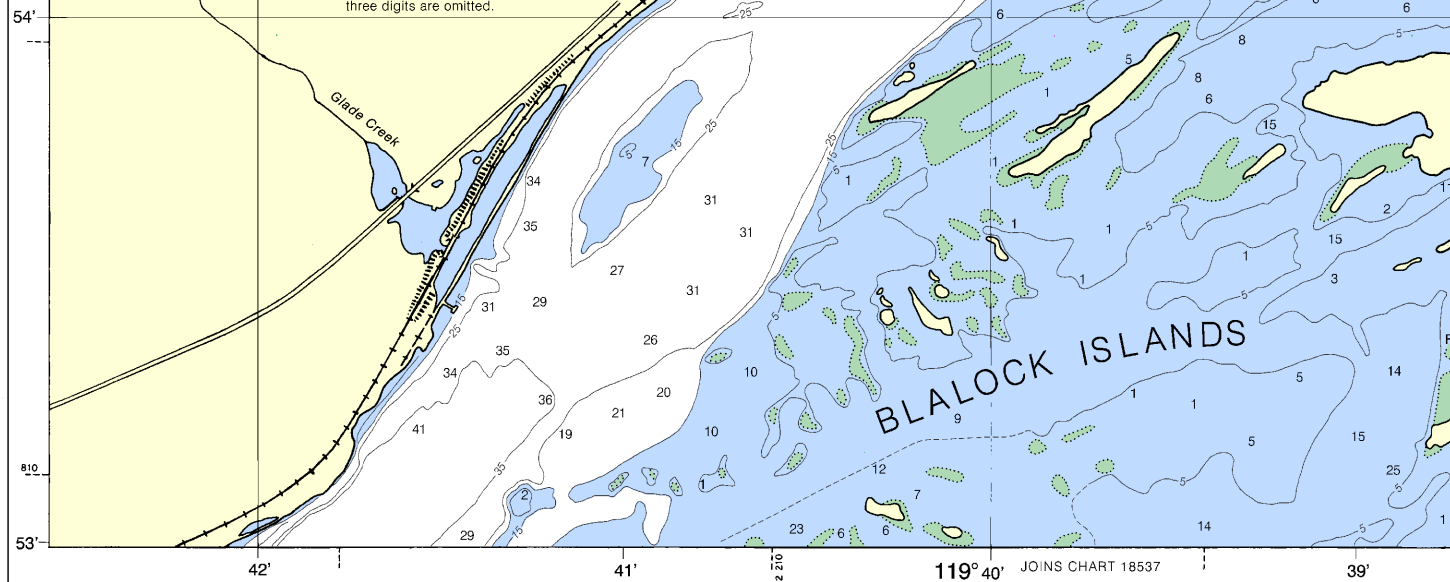
Joins page 4

HEIGHTS  
Heights in feet.

AUTHORITIES  
Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U.S. Coast Guard.

SUPPLEMENTAL INFORMATION  
Consult U.S. Coast Pilot 7 for important supplemental information.

PLANE COORDINATE GRID  
(based on NAD 1927)  
Oregon State Grid, north zone, is indicated by dashed ticks at 5,000 foot intervals. The last three digits are omitted.



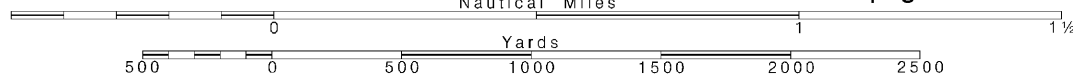
8

Note: Chart grid lines are aligned with true north.

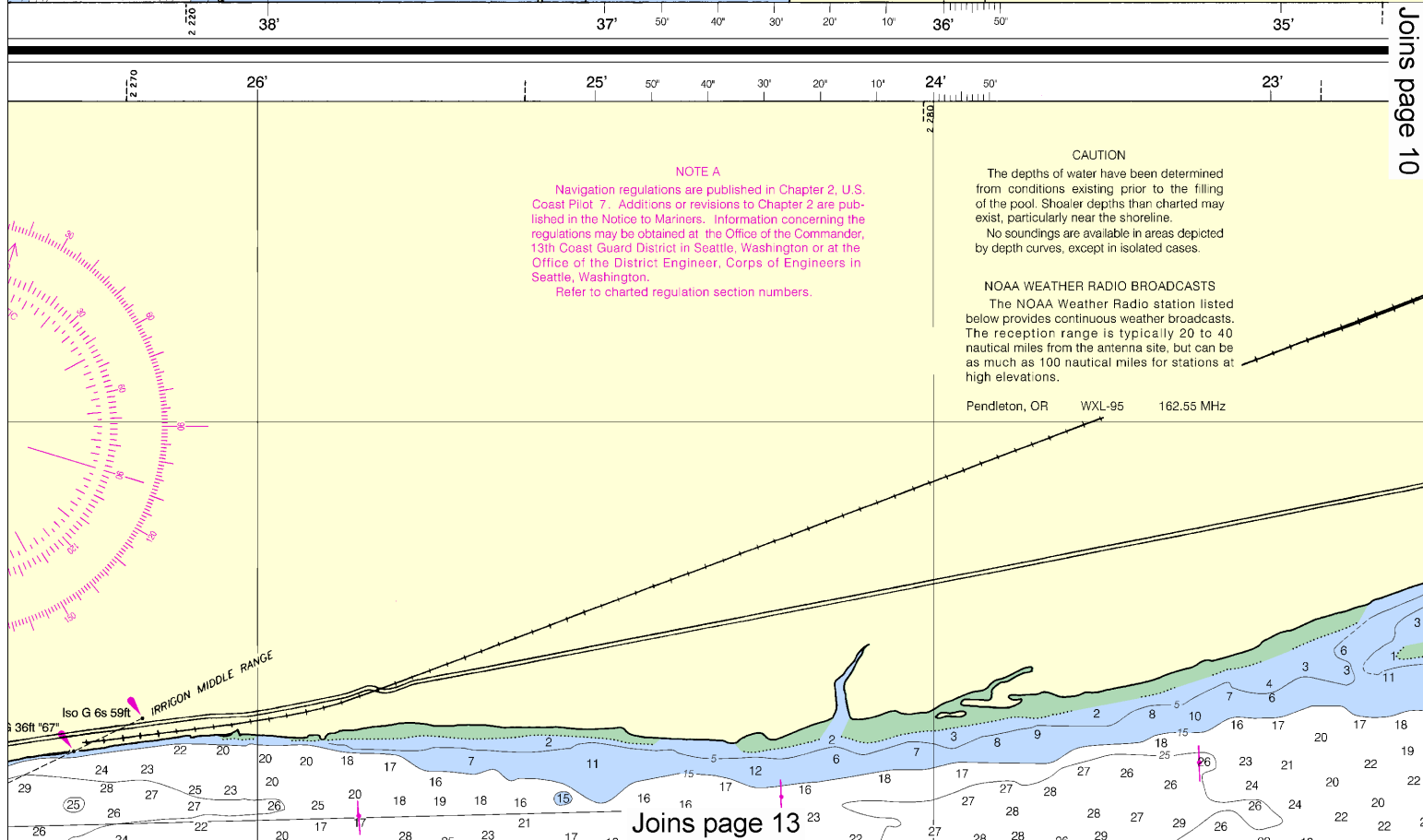
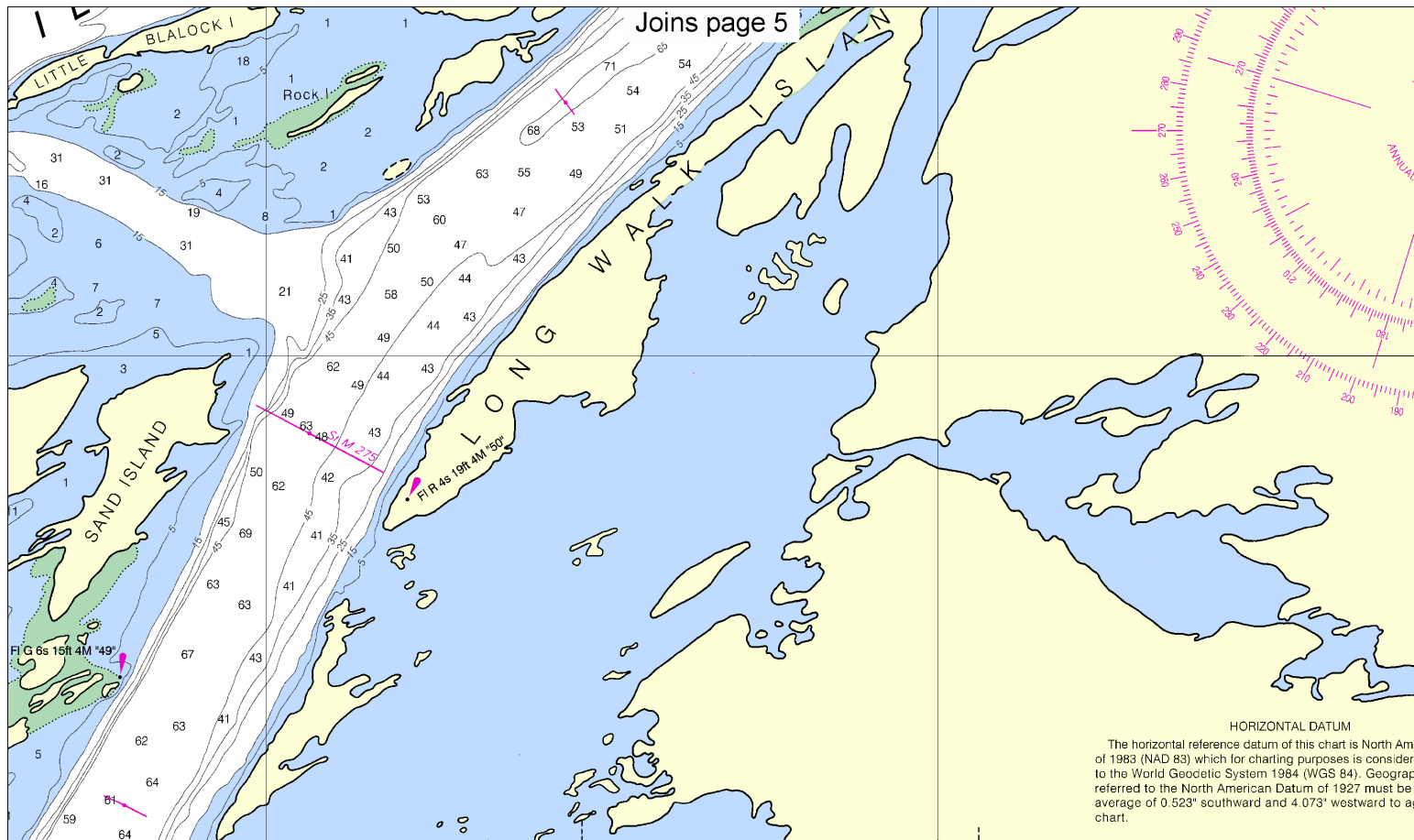
Printed at reduced scale.

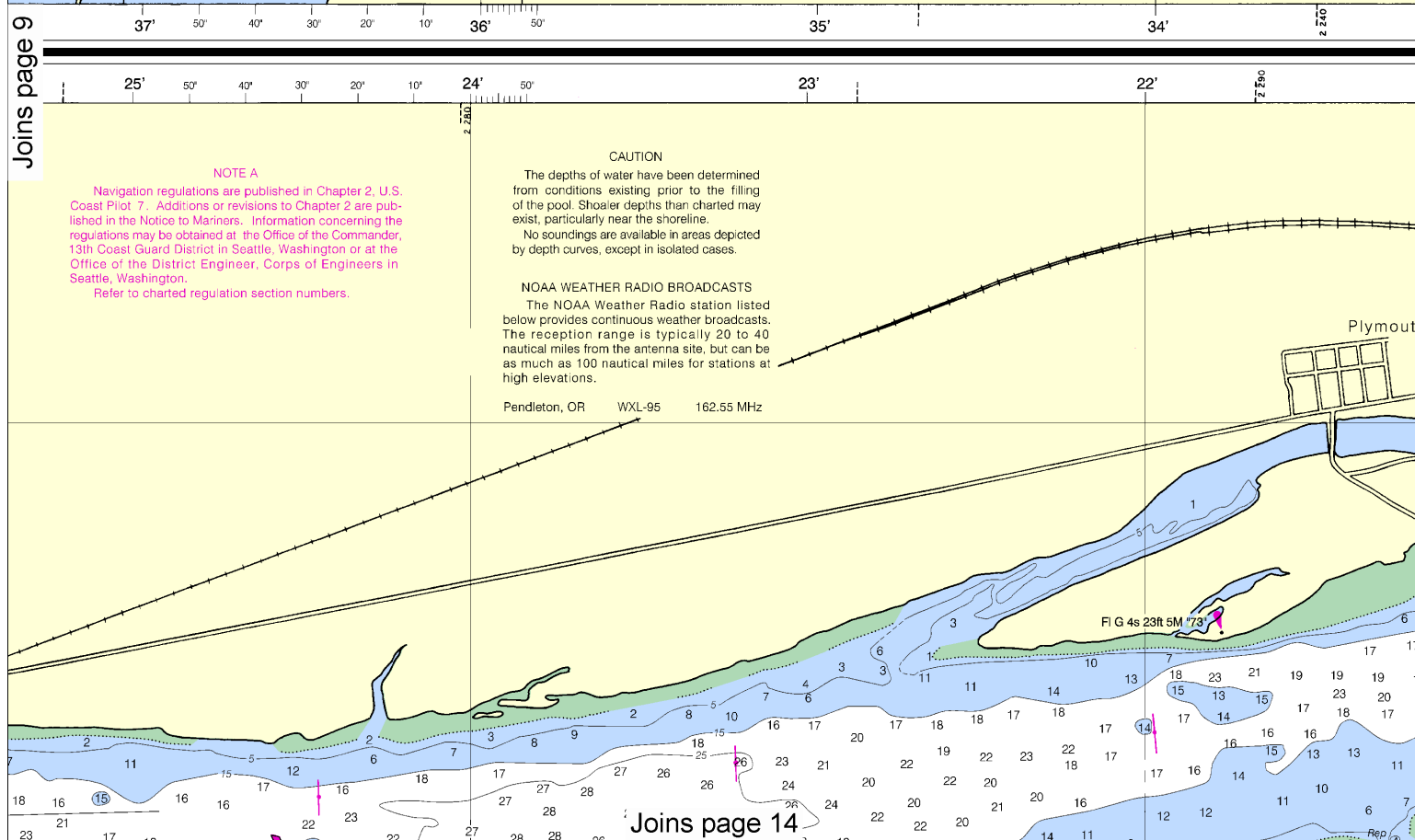
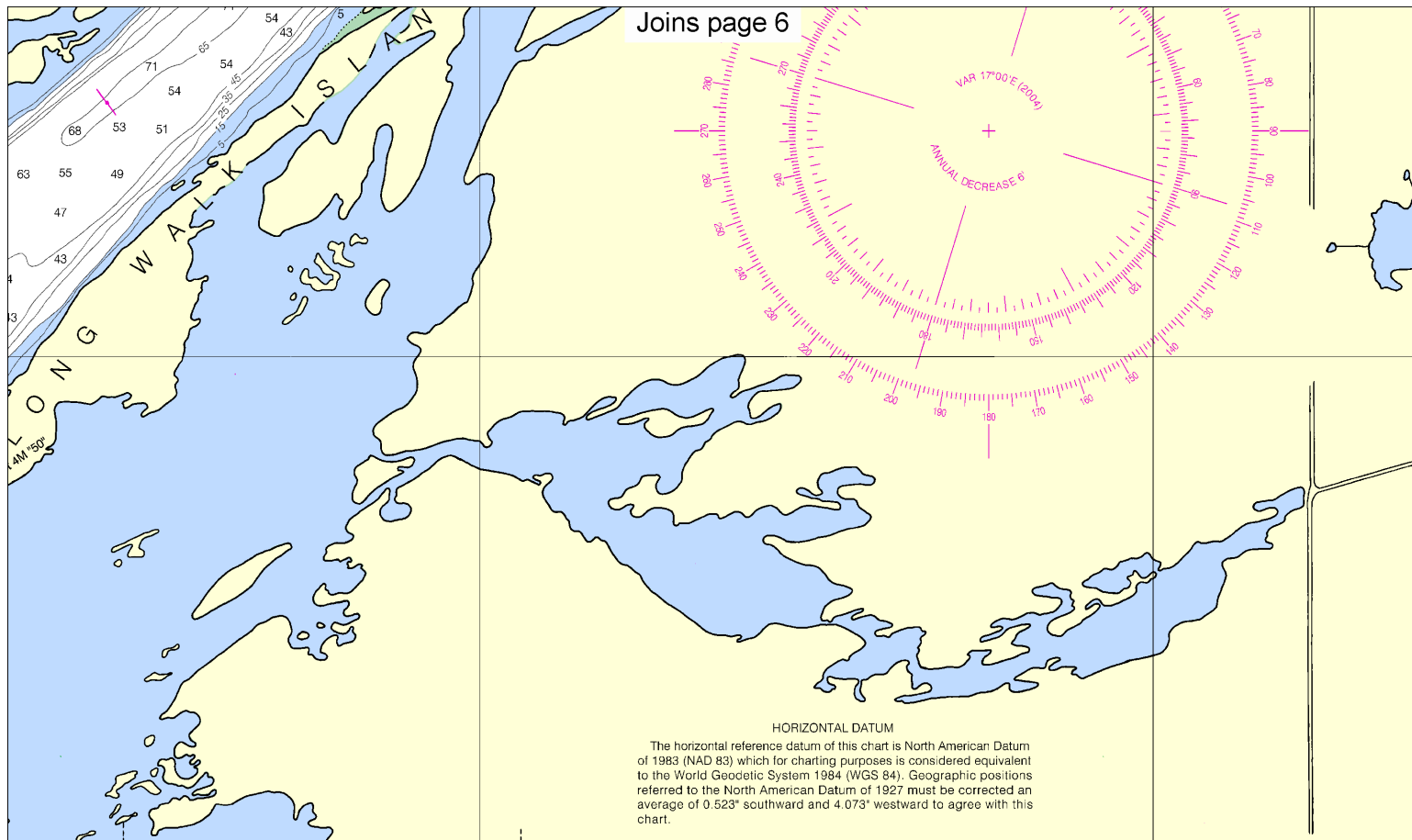
SCALE 1:20,000  
Nautical Miles

See Note on page 5.









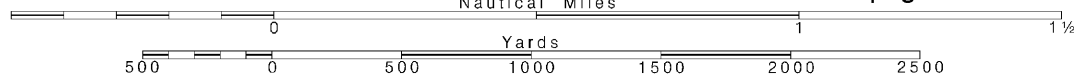
10

Note: Chart grid lines are aligned with true north.

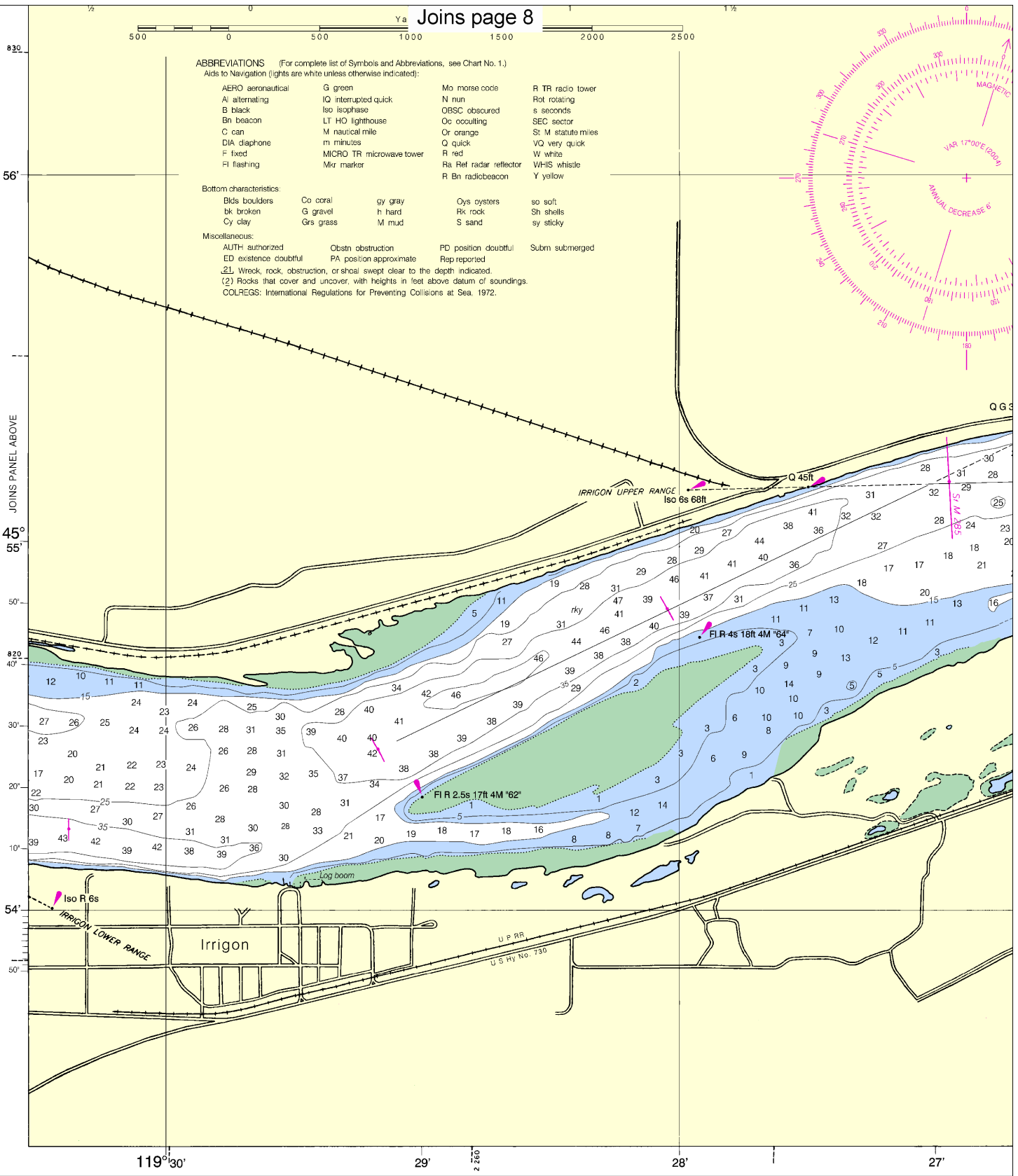
Printed at reduced scale.

SCALE 1:20,000  
Nautical Miles

See Note on page 5.







ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
A/ alternating	IQ interrupted quick	N nun	Rot rotating
B black	Is isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstr obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	
(2) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.			
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.			
COLREGS: International Regulations for Preventing Collisions at Sea, 1972.			

9th Ed., Mar. /04 ■ Corrected through NM Mar. 20/04  
Corrected through LNM Mar. 02/04

18539

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

SOL

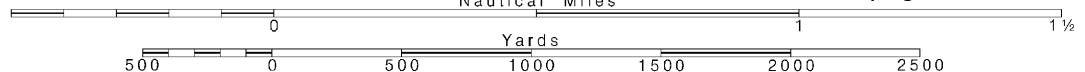
12

Note: Chart grid lines are aligned with true north.

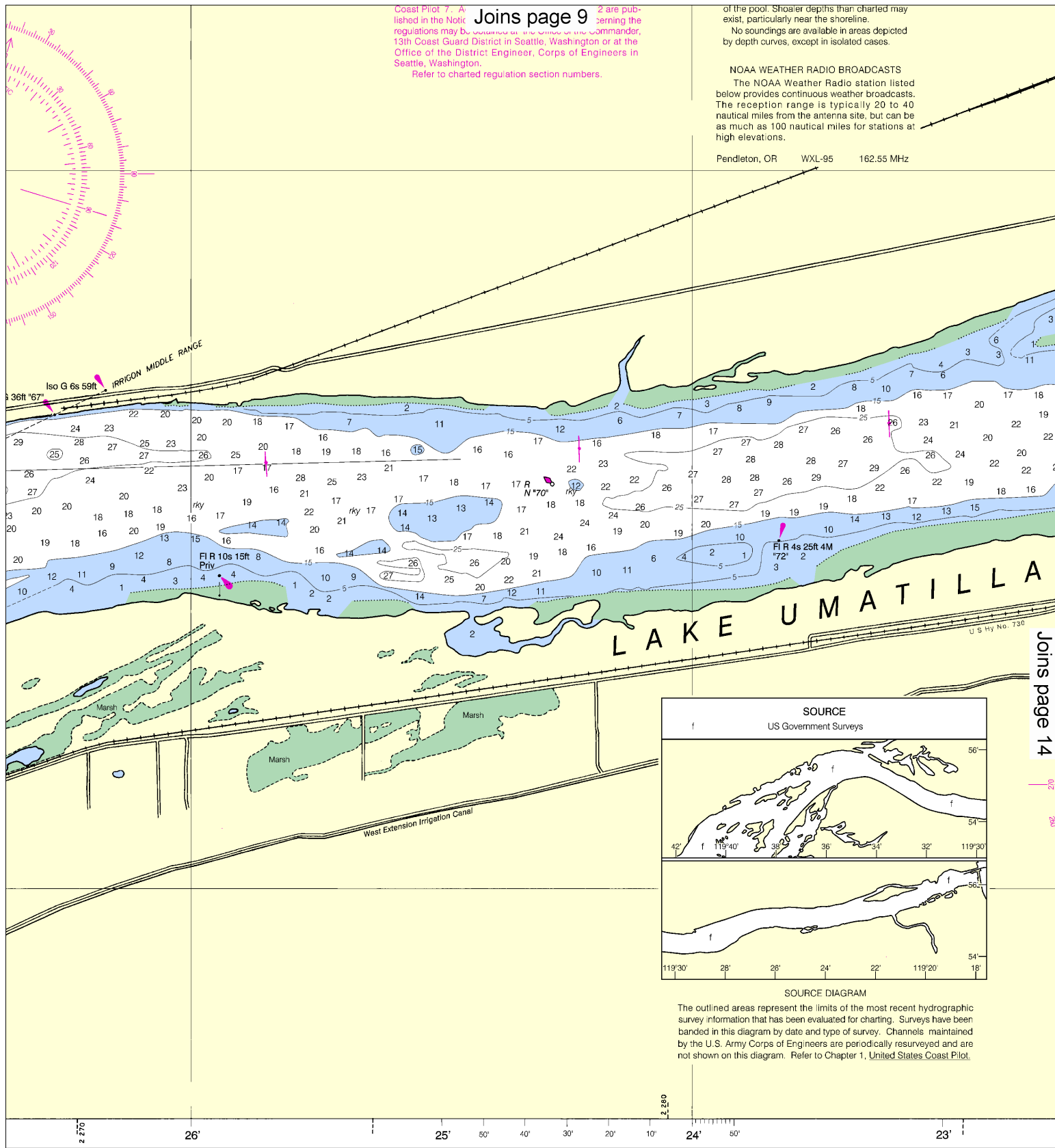
Printed at reduced scale.

SCALE 1:20,000  
Nautical Miles

See Note on page 5.





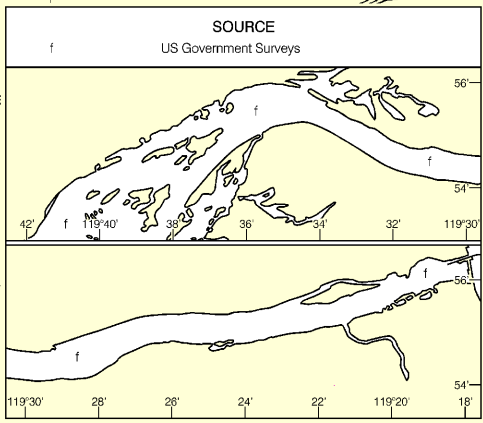


Coast Pilot 7, A Joins page 9 2 are published in the Notice to Mariners. Regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Washington or at the Office of the District Engineer, Corps of Engineers in Seattle, Washington. Refer to charted regulation section numbers.

of the pool. Shoaler depths than charted may exist, particularly near the shoreline. No soundings are available in areas depicted by depth curves, except in isolated cases.

**NOAA WEATHER RADIO BROADCASTS**  
The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Pendleton, OR WXL-95 162.55 MHz



**SOURCE DIAGRAM**  
The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

**OUNDINGS IN FEET**

Published at Washington, D.C.  
U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SERVICE  
COAST SURVEY

FATHOM  
FEET  
METER

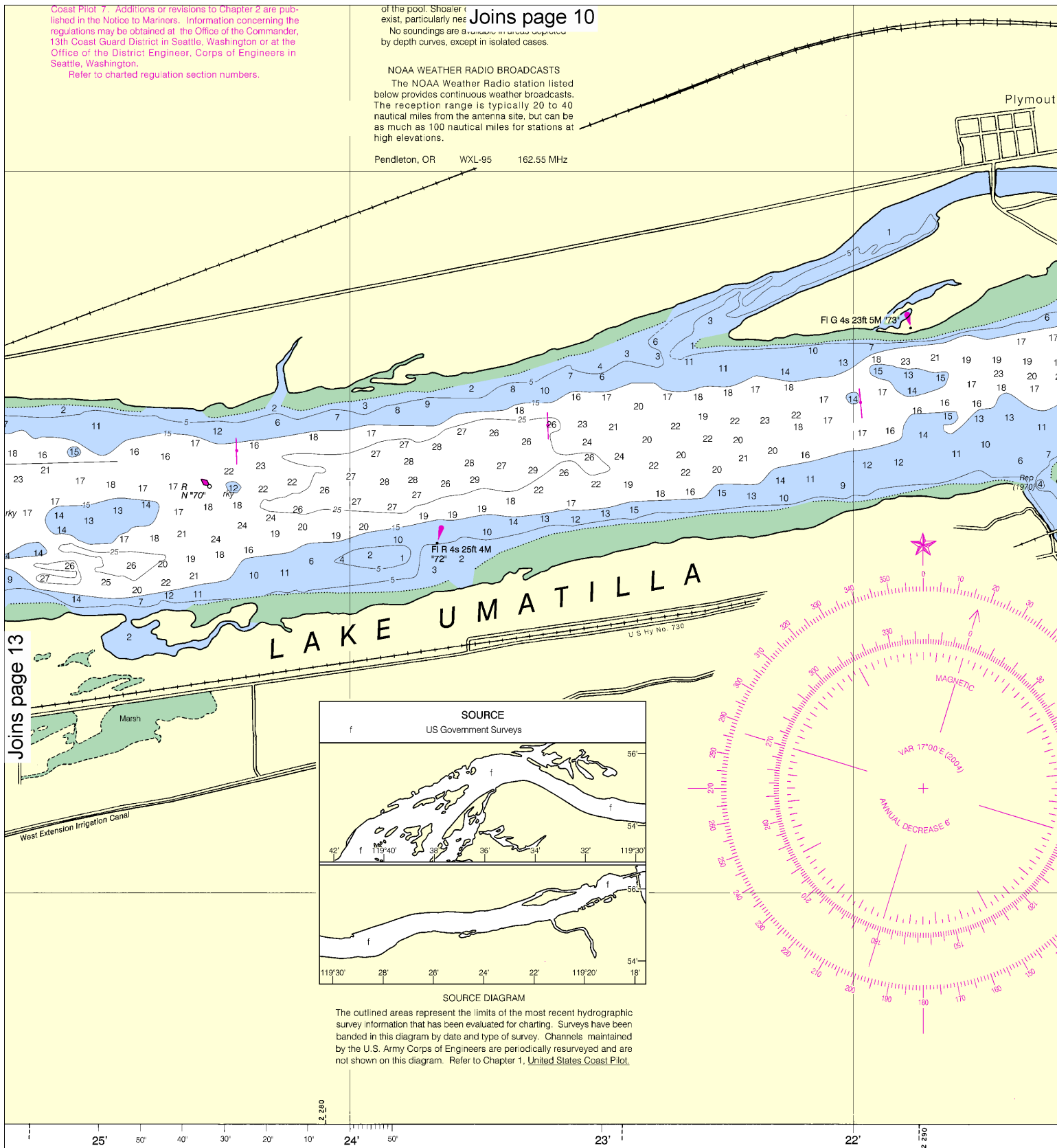
Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Washington or at the Office of the District Engineer, Corps of Engineers in Seattle, Washington.  
Refer to charted regulation section numbers.

of the pool. Shoaler exist, particularly near  
No soundings are available in this section by depth curves, except in isolated cases.

Joins page 10

**NOAA WEATHER RADIO BROADCASTS**  
The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Pendleton, OR WXL-95 162.55 MHz



Published at Washington, D.C.  
U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SERVICE  
COAST SURVEY

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
METERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

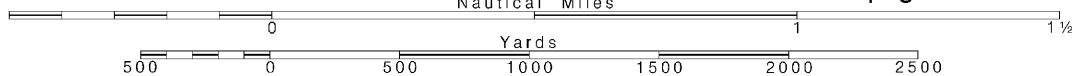
14

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:20,000  
Nautical Miles

See Note on page 5.







EMERGENCY INFORMATION

## VHF Marine Radio channels for use on the waterways:

**Channel 6** – Inter-ship safety communications.

**Channel 9** – Communications between boats and ship-to-coast.

**Channel 13** – Navigation purposes at bridges, locks, and harbors.

**Channel 16** – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

**Channel 22A** – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

**Channels 68, 69, 71, 72 and 78A** – Recreational boat channels.

**Getting and Giving Help** — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.



**NOAA Weather Radio All Hazards (NWR)** is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

## Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

**HAVE ALL PERSONS PUT ON LIFE JACKETS!**

## Quick References

Nautical chart related products and information	—	<a href="http://www.nauticalcharts.noaa.gov">http://www.nauticalcharts.noaa.gov</a>
Online chart viewer	—	<a href="http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html">http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html</a>
Report a chart discrepancy	—	<a href="http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx">http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx</a>
Chart and chart related inquiries and comments	—	<a href="http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs">http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs</a>
Chart updates (LNM and NM corrections)	—	<a href="http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html">http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html</a>
Coast Pilot online	—	<a href="http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm">http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm</a>
Tides and Currents	—	<a href="http://tidesandcurrents.noaa.gov">http://tidesandcurrents.noaa.gov</a>
Marine Forecasts	—	<a href="http://www.nws.noaa.gov/om/marine/home.htm">http://www.nws.noaa.gov/om/marine/home.htm</a>
National Data Buoy Center	—	<a href="http://www.ndbc.noaa.gov/">http://www.ndbc.noaa.gov/</a>
NowCoast web portal for coastal conditions	—	<a href="http://www.nowcoast.noaa.gov/">http://www.nowcoast.noaa.gov/</a>
National Weather Service	—	<a href="http://www.weather.gov/">http://www.weather.gov/</a>
National Hurricane Center	—	<a href="http://www.nhc.noaa.gov/">http://www.nhc.noaa.gov/</a>
Pacific Tsunami Warning Center	—	<a href="http://ptwc.weather.gov/">http://ptwc.weather.gov/</a>
Contact Us	—	<a href="http://www.nauticalcharts.noaa.gov/staff/contact.htm">http://www.nauticalcharts.noaa.gov/staff/contact.htm</a>



— For the latest news from Coast Survey, follow @nauticalcharts



This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

NOAA's Office of Coast Survey



The Nation's Chartmaker